

**(12) UK Patent Application (19) GB (11) 2 388 137 (13) A**

(43) Date of Printing by UK Office 05.11.2003

(21) Application No: 0317297.0

(22) Date of Filing: 28.01.2002

(30) Priority Data:  
(31) 0102021 (32) 26.01.2001 (33) GB

(86) International Application Data:  
PCT/GB2002/000356 En 28.01.2002

(87) International Publication Data:  
WO2002/059456 En 01.08.2002

(51) INT CL<sup>7</sup>:  
**E21B 43/10**

(52) UK CL (Edition V ):  
**E1F FLA**

(56) Documents Cited by ISA:  
**WO 2000/037773 A      FR 002595439 A**  
**US 4319393 A      US 3785193 A**  
**US 3245471 A      US 2627891 A**

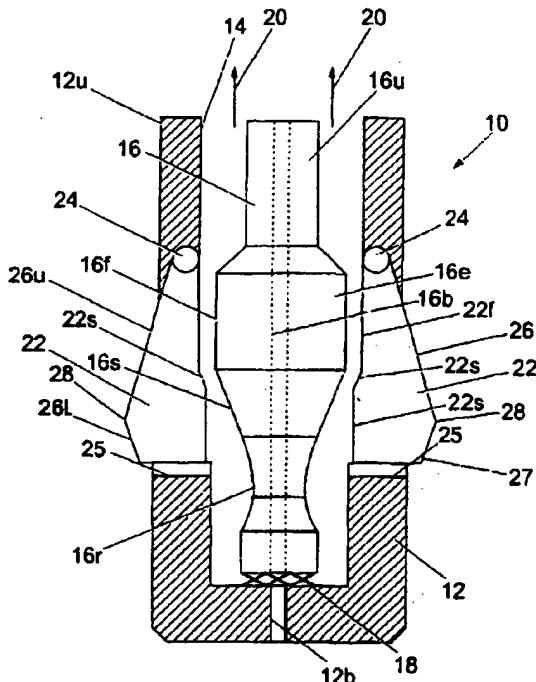
(58) Field of Search by ISA:  
INT CL<sup>7</sup> E21B  
Other  
Online: EPO-Internal, WPI Data, PAJ

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(continued on next page)

**(54) Abstract Title: Expander device**

(57) Apparatus (9) for radially expanding an expandable member, the apparatus including a plurality of radially moveable fingers (22). The radially moveable fingers (22) can move between two positions ; in a first position, the moveable fingers (22) are radially extended to a form a cone to facilitate radial expansion of the expandable member ; in the second position, one or more of the radially movable fingers (22) can move radially inward so that restrictions in the path of the apparatus can be passed.



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2388137

**(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)**

**(19) World Intellectual Property Organization  
International Bureau**



**(43) International Publication Date  
1 August 2002 (01.08.2002)**

PCT

(10) International Publication Number  
**WO 02/059456 A1**

(51) International Patent Classification<sup>7</sup>: E21B 43/10

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**(21) International Application Number:** PCT/GB02/00356

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**(25) Filing Language:** English

(81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

**(26) Publication Language:** English

(83) Designated States (national): AT, AU, CL, AM, AR, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent

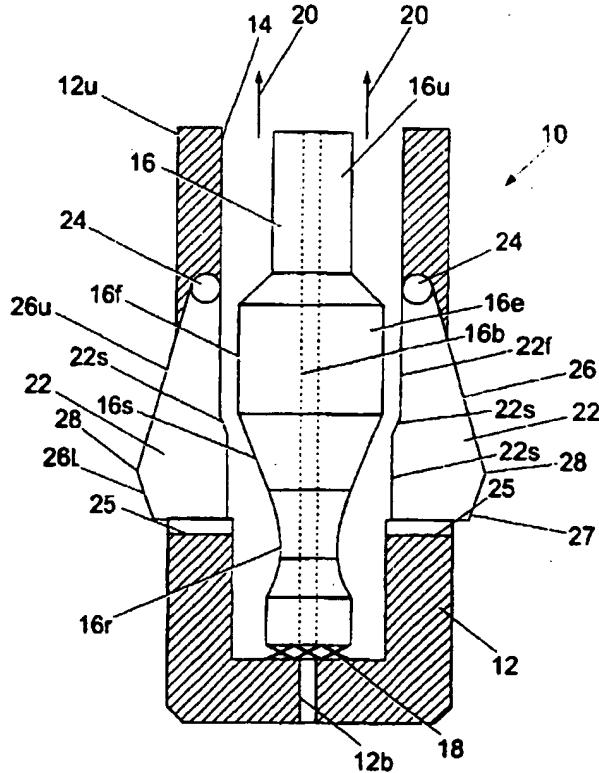
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[Continued on next page]

**(54) Title: EXPANDER DEVICE**



**(57) Abstract:** Apparatus (9) for radially expanding an expandable member, the apparatus including a plurality of radially moveable fingers (22). The radially moveable fingers (22) can move between two positions: in a first position, the moveable fingers (22) are radially extended to a form a cone to facilitate radial expansion of the expandable member, in the second position, one or more of the radially moveable fingers (22) can move radially inward so that restrictions in the path of the apparatus can be bypassed.

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(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*